REMARKS

The Office action of March 26, 2008, has been carefully considered.

Claims 1-8 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite on a number of grounds. The claims have now been entirely rewritten as new claims 9-16, which are in proper form for U.S. practice.

Withdrawal of this rejection is requested.

Claims 1-8 have been rejected under 35 U.S.C. 102(b) as anticipated by or under 35 U.S.C. 103(a) as obvious over Lamerant.

The invention is directed to an improvement in the Bayer process for treatment of bauxite by alkaline digestion. This improvement comprises removing an aliquot of spent liquor from an aluminate liquor circuit in the Bayer process, heating the aliquot of spent liquor, mixing the heated aliquot of liquor with ground bauxite to form a slurry, and returning the slurry to the aluminate liquor circuit. The heating step comprises heating the aliquot of spent liquor to a temperature sufficient that after the mixing step, the slurry is at a temperature greater than about 95°C, and preferably greater than boiling temperature at atmospheric pressure.

According to Lamerant, a suspension of ground bauxite in an aqueous solution comprising sodium hydroxide is heated to a temperature greater than 80°C, a step which involves preparing a suspension by mixing ground bauxite and aqueous NaOH. Since the suspension must be heated to a temperature greater than 80°C, the suspension is necessarily at a temperature of less than 80°C when it is prepared. Hence, Lamerant cannot and does not teach a step of pre-heating the sodium hydroxide solution such that the resulting slurry is a temperature greater than about 95°C when it is formed.

Withdrawal of this rejection is requested.

Claims 1-8 have been rejected under 35 U.S.C. 102(b) as anticipated by or under 35 U.S.C. 103(a) as obvious Harato.

Harato discloses mixing alumina containing and reactive silica-containing ore with an alkaline solution to obtain a slurry having solids greater than 20% by weight, optionally preheating the slurry to a temperature of 70-120°C, then supplying to a tube reactor an alkaline slurry mixture resulting from mixing the slurry with an aqueous alkaline solution that has been preheated to a temperature of about 120-160°C.

Reference is made to column 3, lines 59-62:

> In practicing the process of the present invention, bauxite as the raw material, as is or after being roughly ground, is formed into a slurry, and is charged into a preheating apparatus as is or after being wet ground as desired.

Thus, Harato does not disclose or suggest preheating the alkaline solution to a temperature such that the slurry when formed is at a temperature of at least about 95°C. The claimed invention is, to the contrary, directed to a preheating step for the alkaline solution prior to its first contact with the ground ore. The slurry according to Harato et al is heated only after it is formed, and it is only the slurry which is mixed with a solution which has been preheated.

Withdrawal of this rejection is accordingly requested.

Claims 1-7 have been rejected under 35 U.S.C. 102(b) as anticipated by, or under 35 U.S.C. 103(a) as obvious over McDaniel.

McDaniel discloses a double digestion process in which the bauxite is first reacted with spent caustic soda solution at 113-205°C to produce a first pregnant liquor stream, a granular residue stream and a muddy substance stream. The granular residue stream is discarded, while the muddy

substance stream is reacted with or without a small portion of bauxite with a spent caustic soda stream at 206-350˚C to produce a second pregnant liquor stream and a red mud stream which is discarded.

At column 4, lines 1-4, McDaniel states:

> Accordingly, a bauxite is ground with a spent caustic soda solution and pumped as a slurry into digesters and reacted at a temperature ranging from 113˚ C. to 205˚C. with additional spent caustic soda solution, . . .

At column 4, lines 34-41, McDaniel states that:

> ...bauxite is ground to less than 0.2 inches but preferably to less than 0.1 inches with a spent caustic soda stream in vessel 1 to form a bauxite slurry. The bauxite slurry is pumped into reaction vessel 2 and reacted at 113˚ C. to 205˚C. for 2-200 minutes with more spent caustic soda solution to form a stream of pregnant liquor granular residue and muddy substance.

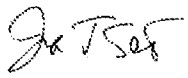
Thus, McDaniel teaches forming a slurry from ground bauxite and caustic soda, *then* pumping the slurry into a reaction vessel and heating to a high temperature. McDaniel does not disclose or suggest preheating the caustic soda solution to a high temperature to obtain a slurry which is close to the boiling point upon formation.

Withdrawal of this rejection is accordingly requested.

The specification has been amended to provide a reference to the prior filed PCT application, to utilize proper subject matter headings, and to add a section of "Brief Description of the Drawings."

In view of the foregoing amendments and remarks, Applicants submit that the present application is now in condition for allowance. An early allowance of the application with amended claims is earnestly solicited.

Respectfully submitted,



Ira J. Schultz
Registration No. 28666
Attorney for Applicants
(703)837-9600, ext. 23